SatCom Law LLC
1317 F St. NW, Suite 400
Washington, D.C. 20004
T 202.599.0975
www.satcomlaw.com

December 6, 2017

By Electronic Filing

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: SES Notice of *Ex Parte* Presentation, GN Docket No. 17-183

Dear Ms. Dortch:

On December 4, 2017, representatives of SES met with Media Bureau Chief Michelle Carey, Associate Bureau Chief Holly Saurer, Chief Engineer Jeffrey Neumann, and Engineering Division Deputy Chief Sean Yun to discuss the above-referenced proceeding. Participants in the meeting on behalf of SES were Gerry Oberst, President of SES Americom, Inc., Kimberly Baum, SES Americom Vice President, Spectrum Management & Development Americas, as well as outside counsel to SES Michele Farquhar of Hogan Lovells US LLP and the undersigned. The discussion covered a number of points raised by SES and by the Satellite Industry Association in their comments and reply comments in this docket.

SES discussed its history as a C-band satellite service provider and described its cable neighborhood architecture, which allows content providers to efficiently deliver programming nationwide to cable head ends, which then distribute the programming to consumers in their cable systems. SES emphasized the importance of C-band satellite capacity not only to cable operators, but to other media industry members as well, noting that virtually all of the video and audio programming enjoyed by U.S. consumers travels over a C-band satellite at some point in its journey to the end user. In many cases, content providers have contracted with SES for protected service that ensures their ability to switch to alternate satellite capacity in the event of an outage affecting the customer's primary satellite facility. SES stated that its priority in this proceeding is to ensure that it can continue to meet its obligations to customers that rely on C-band satellites for critical services.

SES commented that although the record shows intensive use of C-band frequencies for satellite services, terrestrial interests claim that C-band satellite spectrum is underutilized, due in large part to the fact that most earth stations used to receive C-band programming content are unregistered. SES noted that registration of receive-only terminals is voluntary and provides little benefit, since it only protects the earth station from subsequent C-band microwave links, and microwave use of C band receive frequencies is extremely limited. In contrast, registration is fairly costly, requiring payment of a $435 fee per site and submission of a coordination report that typically costs approximately $700. As a result, many receive earth station operators have chosen not to register their facilities. For example, the American Cable Association has

estimated that 90% of its members' receive earth stations are unregistered, and if this rate is typical of C-band users, there could be more than 30,000 receive-only earth stations in total.

SES noted that it has been encouraging its customers to register their earth stations and also urging the Commission to streamline the registration framework to make it simpler and more affordable. For example, SES has suggested that the Commission could undertake a two-step procedure, collecting basic location information first through a simplified online data entry process with no fee and subsequently conducting a more complete antenna registration, but with significant modifications to encourage participation. Specifically, SES has argued that the Commission should waive or significantly reduce the registration filing fee and eliminate the coordination requirement for receive-only earth stations.

SES also described to the Media Bureau its concerns about the potential negative effects of introducing terrestrial mobile services into heavily-used C-band spectrum. SES argued that forced sharing would be a lose-lose proposition, as it would create risks to existing satellite services while creating almost no opportunity for new terrestrial operations.

To illustrate this problem, SES provided copies of maps it included in its reply comments that depict 30- and 70-kilometer distances surrounding the receive earth stations listed in the FCC's database.[1] These distances were derived from calculations by Ericsson that even under the best circumstances, avoiding co-channel interference to a receive earth station would require a separation distance greater than 30 kilometers, and that distance would be up to 70 kilometers with more typical earth station operating parameters and taking into account the greater levels of protection that high-reliability C-band links require.[2] Because they reflect only licensed or registered earth stations, the maps substantially underrepresent the extent of the protection zones that would be needed to prevent interference to active receive earth stations, but even protecting this limited subset of antennas would clearly preclude terrestrial operations in much of the U.S.

SES also argued that proposals from wireless interests for replacing C-band capacity using fiber or other satellite spectrum are not workable for programming distribution. Fiber lacks the ubiquitous geographic reach of C-band satellites, and forced migration to fiber would therefore leave many video providers in smaller cities and rural areas without cost-effective access to programming and advanced video services. Ku- and Ka-band satellites are more susceptible to rain fade and cannot provide the near-perfect reliability of C-band satellites. Moreover, there is not sufficient available capacity on these satellites to take over the load being carried on C-band spacecraft.

SES noted that it is examining proposals in the record, including the framework suggested by Intelsat and Intel for a market-based solution, as well as brainstorming about other ideas that could preserve satellite access to C-band spectrum for highly reliable programming distribution services while accommodating expanded terrestrial use. SES emphasized that it strongly

[1] Reply Comments of SES Americom, Inc., GN Docket No. 17-183, filed Nov. 15, 2017 at 20-23.

[2] Comments of Ericsson, GN Docket No. 17-183, filed Oct. 2, 2017 at 8 and Attachment A.

opposes any suggestion that the entire 500 MHz of C-band downlink spectrum could be made available, as that would not allow SES to continue providing important services to its customers. Even freeing up even a limited portion of the C-band spectrum would be immensely difficult and costly. Due to its network design and planning, SES's center-of-the arc cable neighborhood spacecraft are fully loaded, and SES does not have sufficient alternative C-band capacity elsewhere in its fleet with the 50-state coverage necessary for video distribution customers.

SES reiterated that to be viable, any approach would need to compensate and incentivize incumbents given their substantial investment in C-band satellite networks and the complexity of existing operations. SES stated that it is reviewing Commission precedent and models to explore options for expanding terrestrial use of C-band receive frequencies while maintaining SES's ability to continue providing highly reliable services that benefit U.S. consumers nationwide.

Please address any questions regarding these matters to the undersigned.

Respectfully submitted,

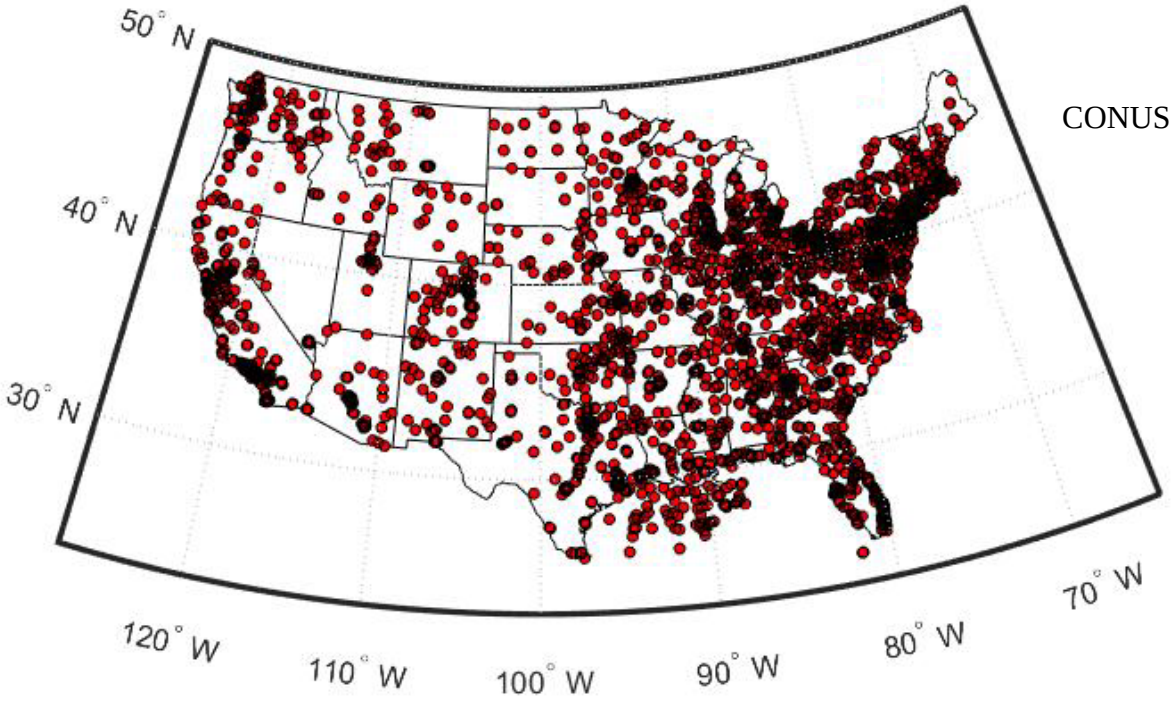
/s/ Karis A. Hastings

Karis A. Hastings
Counsel for SES Americom, Inc.
karis@satcomlaw.com

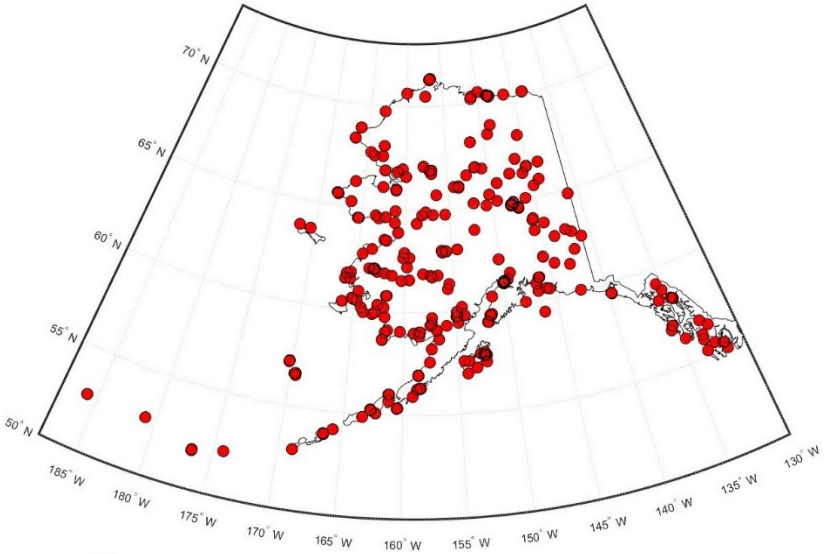
Attachment

cc: Michelle Carey
Holly Saurer
Jeffrey Neumann
Sean Yun

30-Kilometer Zones



CONUS



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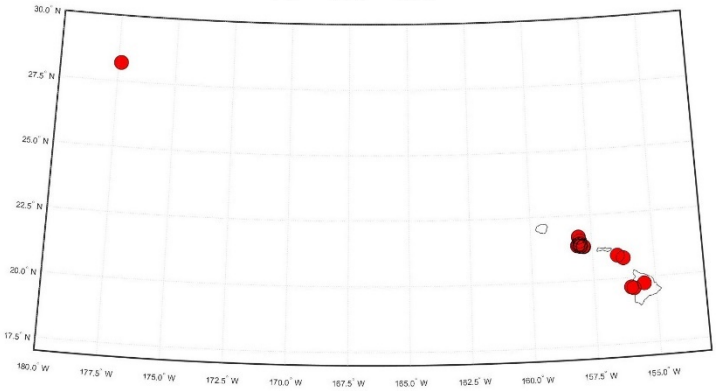
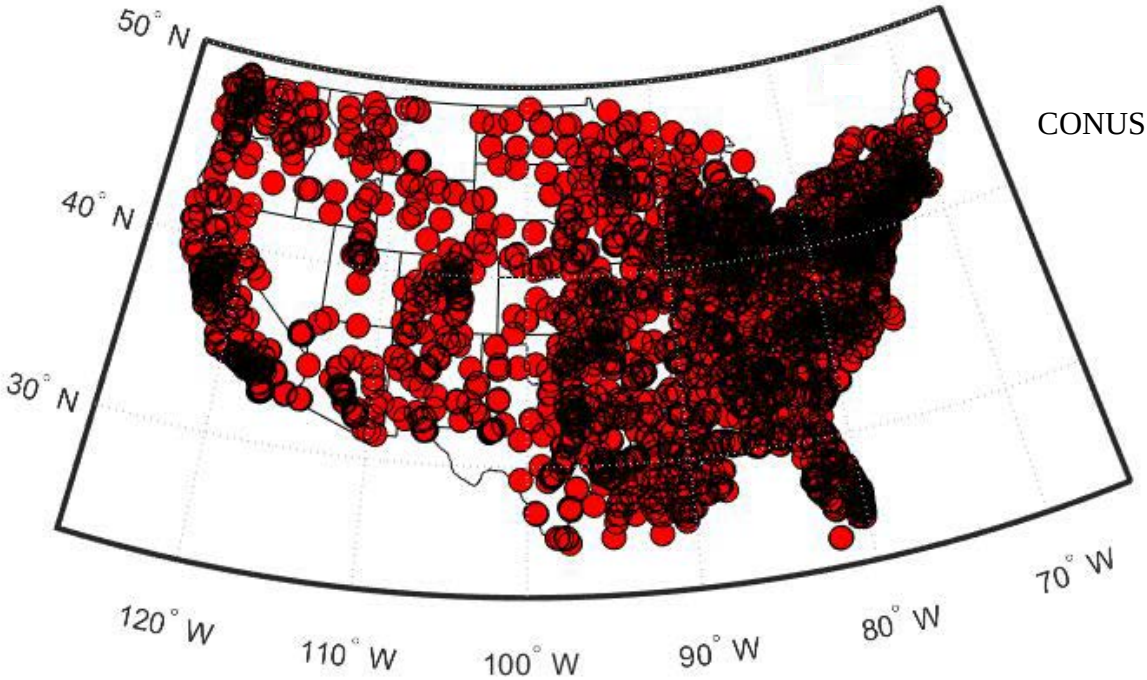


Hawaii and the Midway Atoll

70-Kilometer Zones



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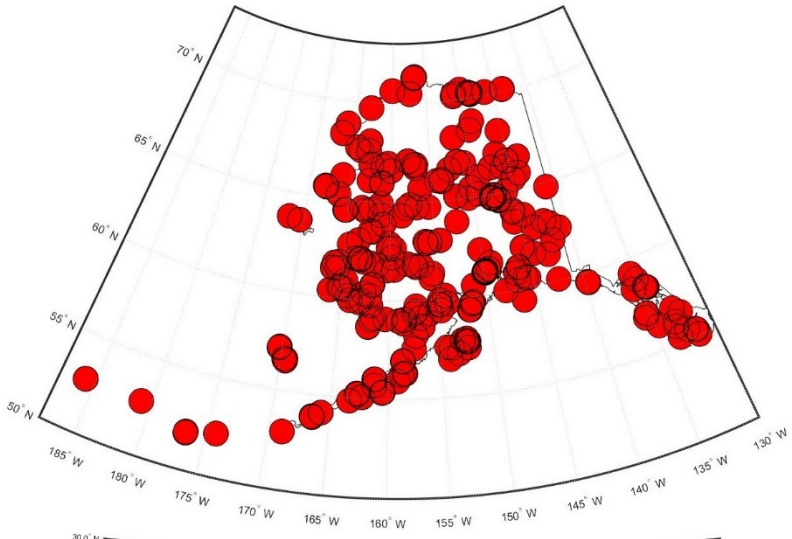

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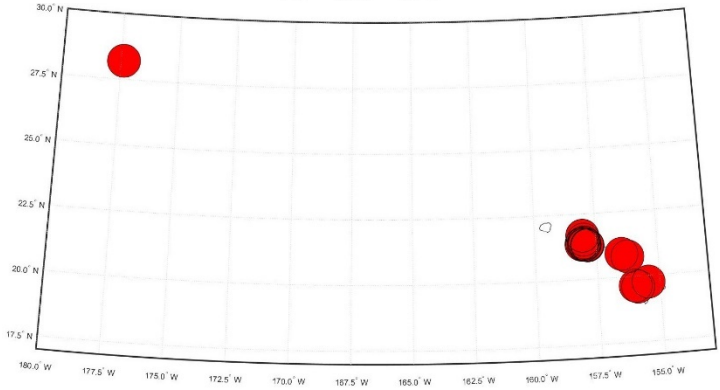

Hawaii and the Midway Atoll